

Amendments to the Drawings:

Please substitute the enclosed one (1) sheet of drawings for the drawings currently on file.

REMARKS/ARGUMENTS

Reconsideration of this patent application is respectfully requested in view of the foregoing amendments, and the following remarks. Claims 1-9 and 11-13 are in the application. Claims 1-5, 7-8 and 11 have been amended. Claim 10 has been canceled. New claims 12 and 13 have been added. No new matter has been added.

The Examiner required that FIGS. 3 and 4 be labeled "Prior Art". Applicant submits a re-labeled FIG. 3 and FIG. 4 herewith.

The Examiner rejected claims 1-7 under 35 USC §112. Applicant has amended claims 1-5 and 7 accordingly. Claims 12 and 13 have been added to include subject matter deleted from claims 4 and 5.

The Examiner rejected claims 1-7 under 35 USC §103 as being unpatentable over Stava taken with Stone et al. Applicant respectfully traverses.

Stava describes a device and method for starting the electric arc of a welder by applying a high frequency, high voltage starting signal across the spark gap between the electrode and workpiece of the welder. As stated in the description of the present patent application, contactless HF ignition involves the application of the high frequency signal during the start phase.

In contrast to this, the present invention claims a method for the contactless ignition of a welding arc, whereby several pulse packets with pre-settable frequencies or time periods are applied with several successive ignition pulses emitted in a pulse packet, and a packet interval is executed between each pulse packet. By applying the ignition pulses in several pulse packets between which accordingly long intervals are provided, the coupled energy of the ignition pulses can be selected to be accordingly high so as to ensure a rapid and reliable ignition, while enabling the maximally permissible time averaged energy supplied to be arranged below the prescribed limit values. As many ignition pulses as possible are actually arranged per pulse

packet, which calls for as high an ignition pulse frequency as possible. The ionization of the gas present between the welding electrode and the workpiece to be worked is facilitated by an increased number of ignition pulses, and hence the ignition of the welding arc is more readily achieved. The ignition method according to the present invention is characterized by a particularly high quality and a reliable and rapid ignition of the electric arc. This ignition method enables an ignition with a larger distance provided between the welding electrode and the workpiece, or a substantially more precise ignition at usual distances than have been feasible with conventional methods. Due to the low mean energy introduction, the safety risk will be minimized too, i.e. the operator of a welding torch will not be electrified at all, or less strongly. Such a reduced electrification effect helps avoid accidents, for instance at a fall of a welder from a scaffold or the like.

It is important, that the mean introduced energy is very low despite the high energy of the single ignition pulses. Claim 1 has been amended to clarify this point.

The present patent application is distinguished over the state of the art by application of several pulse packets with pre-settable frequencies and packet period durations or time periods, wherein several successive ignition pulses are emitted in a pulse packet and a packet interval is each executed between said pulse packets. These features are not taught or suggested by the cited references, taken either singly or in combination.

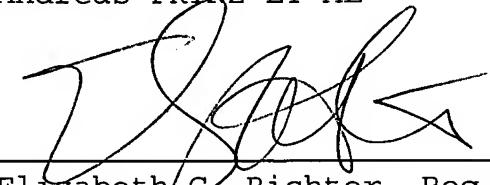
Claims 8-10 are rejected under 35 USC §103 as being unpatentable over Lisser, and claim 11 is rejected as being unpatentable over Lisser in view of Stone. Applicant respectfully traverses.

Claim 8 has been amended to include the elements of claim 10, now canceled. Claim 8 now includes a device for controlling the ignition pulses, which is connected with the charge circuit. This provides for control over the ignition pulses and therefore a suitable adaptation of the ignition to the respective welding parameters.

The high energy of the ignition pulses of the present invention, as discussed above, can be achieved by using a pulse compression circuit as claimed in claims 8 and 9-11. On the other side, the ignition method according to the present invention is very safe, due to the high number of ignition pulses within a pulse packet and the repetition of more such pulse packets. Such features are not taught or suggested by Lisser or Stone.

Accordingly, Applicant submits that claims 1-9 and 11-13 are patentable over the cited references, taken either singly or in combination. Early allowance of the amended claims is respectfully requested.

Respectfully submitted,  
Andreas PRINZ ET AL



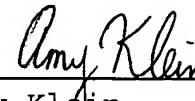
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Enclosure: One (1) sheet of replacement drawings

I hereby certify that this correspondence is being deposited with the U.S. Postal Service as first class mail in an envelope addressed to: Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on June 2, 2008.



Amy Klein